

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) Publication number:

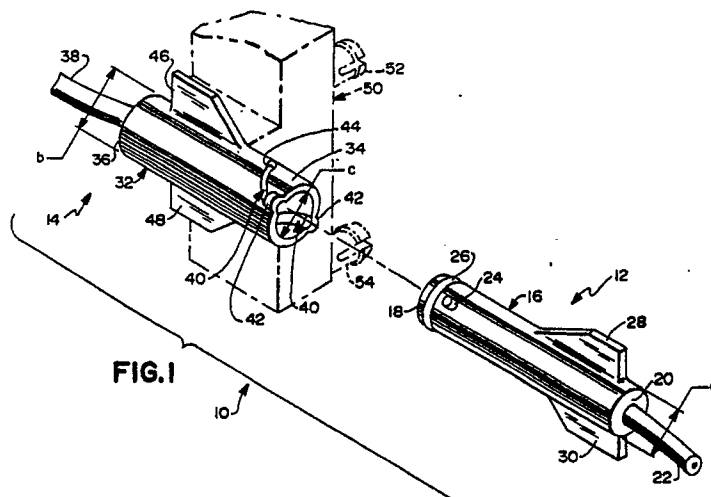
0 384 592 A3

(12)

EUROPEAN PATENT APPLICATION(21) Application number: **90301056.9**(51) Int. Cl.⁵: **H01R 13/623**(22) Date of filing: **01.02.90**(30) Priority: **24.02.89 US 314991**(43) Date of publication of application:
29.08.90 Bulletin 90/35(84) Designated Contracting States:
DE FR GB(88) Date of deferred publication of the search report:
16.01.91 Bulletin 91/03(71) Applicant: **MOLEX INCORPORATED**
2222 Wellington Court
Lisle Illinois 60532(US)(72) Inventor: **Geib, Lawrence E.**
904 Capistrano Terrace
Bartlett, Illinois 60103(US)
Inventor: **Gugelmeyer, Robert J.**
1565 Cumberland
Aurora, Illinois 60504(US)(74) Representative: **Slight, Geoffrey Charles et al**
Graham Watt & Co. Riverhead
Sevenoaks Kent TN13 2BN(GB)(54) **Quick disconnect automotive battery connection.**

(57) Plug and socket connectors (12, 14) include mateable pin and socket terminals (56, 58) (see Fig. 2) that are of split design to achieve inward deflection of the pin terminal contacts (64, 66) and outward deflection of the socket terminal contacts (72, 74) with correspondingly high contact forces and large contact surface areas. The terminals (56, 58) are securely mounted in housings (16, 32) that are mateable with one another. One housing (32) in-

cludes helically formed cam slots (40) that are dimensioned to receive cam followers (24) unitarily molded with the opposed housing (16). The helical cam slot (40) provides a desirable mechanical advantage during mating and unmating of the plug and socket connectors and contributes to plural directional wiping of the terminals (56, 58) insert molded therein.

**FIG. 1****EP 0 384 592 A3**



European
Patent Office

EUROPEAN SEARCH REPORT

Application Number

EP 90 30 1056

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	US-A-3 478 302 (CHIRUMBOLO) * column 2, line 15 - column 3, line 22; figure 1 * - - - -	1,7,8	H 01 R 13/623
A	US-A-4 059 324 (SNYDER ET AL.) * column 1, lines 42 - 60 ** column 2, line 23 - column 3, line 47; figures 1, 2 * - - - -	1,7,8	
A,D	EP-A-0 052 538 (THE BENDIX CORPORATION) * claim 1; figure 1 & US-A-4359256 * - - - -	1,7,8	
A	US-A-3 184 703 (PISCITELLO ET AL.) * column 2, lines 8 - 33 ** column 3, line 56 - column 4, line 19; figures 1-3 * - - - -	1,7,8	
A	US-A-4 743 207 (CLARK) * abstract; claim 1; figure 1 * - - - -	1,7,8	
A	DE-B-2 136 022 (SIEMENS) * column 3, line 45 - column 4, line 34; figure 1 * - - - -	1,7,8	
A	US-A-3 136 592 (MILLER) * claim 1; figure 1 * - - - - -	1,7,8	TECHNICAL FIELDS SEARCHED (Int. Cl.5)
The present search report has been drawn up for all claims			H 01 R
Place of search		Date of completion of search	Examiner
The Hague		29 October 90	CLOSA D.
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons &: member of the same patent family, corresponding document			